



GUIDELINE 22 - INERT WASTE DISPOSAL VARIANCE

North Dakota Department of Health - Division of Waste Management

918 E. Divide Ave., 3rd Fl., Bismarck, ND 58501-1947

Telephone: 701.328.5166 • Fax: 701.328.5200 • Website: www.ndhealth.gov/wm

Updated 12-2009

I. Introduction

The North Dakota Department of Health (Department) regulates solid waste storage, transportation, and disposal through the North Dakota Solid Waste Management Rules (NDAC 33-20). In most instances, regulation is accomplished through permits issued to waste haulers, transfer stations, or landfills. Section 33-20-01.1-14 NDAC allows the Department to issue variances from the state solid waste rules as follows:

“Variances. Whereupon written application the department finds that by reason of exceptional circumstances strict conformity with any provisions of this article would cause undue hardship or would be unreasonable, impractical, or not feasible under the circumstances, the department may permit a variance from this article upon such conditions and within such time limitations as it may prescribe.”

The Department, in reviewing variance requests for one-time inert waste disposal events, considers various practical factors, including: (1) waste characteristics, (2) waste volume, (3) emergencies, (4) proximity of the waste source to permitted landfills, and (5) characteristics of the proposed waste disposal site. The duration of the inert waste disposal variance must be limited to no more than 90 days to accomplish the project, and must be restricted to inert waste disposal. By definition, inert waste does not form contaminated leachate or serve as food for vectors. Inert waste examples include: metal, wood, bricks, asphalt or cement concrete, and other building construction materials such as plaster, drywall, siding, shingles, insulation, and glass.

The Department's Solid Waste Program has prepared this guideline and documents required for the application completion to provide information and guidance for those persons interested in applying for a one-time, 90-day inert waste disposal variance. The application includes: (1) the inert waste disposal variance application; (2) supplemental forms for open burning variances and asbestos inspections; and (3) information on prohibited wastes and recycling. At a minimum, the inert waste disposal variance form and supporting maps, plans, diagrams, narrative, etc., must be completed to receive the variance. Supplemental forms for certain activities (open burning, asbestos inspection) may also require completion to receive the variance. Please refer to applicable sections of this guideline to determine which supplemental forms may be required with the application, or contact the Department's Solid Waste Program (SWP) at 701.328.5166 with questions.

II. Prohibited Waste or Materials

- A. A one-time disposal variance will be granted only for disposal of inert waste (concrete, wood, metal, etc.). All waste, including structures scheduled for demolition, should be

carefully inspected to ensure it contains no wastes which may form contaminated leachate, pollute surface water or groundwater, pollute the air, or attract vectors (rodents, insects), animals, or snakes. Limiting disposal to inert materials will help alleviate public health concerns, long-term liability, and concerns on saleability of the disposal site property.

The following wastes are prohibited from disposal under an inert waste variance. These wastes must be removed and properly handled or disposed before demolition or disposal:

1. Household garbage, food, animal carcasses, and other putrescible waste;
2. Liquids, solvents, and paint;
3. Laboratory supplies and cleaning supplies;
4. Insecticides, herbicides, or fungicides and their containers;
5. Oil and oil containers, lead-acid batteries, and all appliances;
6. Fluorescent light fixtures and bulbs, mercury-containing electrical switches and thermostats, and transformers;
7. Regulated asbestos-containing materials; and
8. Any other waste which may form contaminated leachate, pollute surface water or groundwater, pollute the air, or attract vectors.

B. **Liquids, used oil, lead-acid batteries, and major appliances** (white goods) are prohibited from disposal under a variance or at permitted landfills. Small appliances may contain heavy metals and must be disposed in permitted landfills or be recycled. Established recycling markets exist for used oil, lead-acid batteries, and major appliances (see North Dakota recycling directory). Departmental Management Outline (MO) statements on lead-acid batteries and used oil are included with the application. Please contact the Department's Hazardous Waste Program at 701.328.5166 with questions about used oil or lead-acid batteries.

C. **Solvents, paints, chemicals, or pesticides** must be removed from structures scheduled for demolition or segregated from inert waste. If not usable, very small quantities (household quantities) of these wastes may be disposed in permitted municipal waste landfills. Large quantities of these wastes may require handling by a hazardous waste management firm. The Department's MO statement on disposal of pesticides and their containers is included with the application. Please contact the Hazardous Waste Program at 701.328.5166 with questions about pesticides, solvents, paints, and chemicals.

D. **Mercury-containing fluorescent light bulbs, thermostats, and electrical switches** must be removed from structures scheduled for demolition. **Fluorescent light bulb**

fixtures and electrical transformers must be removed from structures scheduled for demolition because these items may contain Polychlorinated Biphenyls (PCBs). Depending on the quantities of these items, and the concentration of mercury or PCBs, disposal may be allowed in permitted municipal waste landfills. The Department's MO statement on mercury or PCB-containing waste is included with the application. Please contact the Hazardous Waste Program at 701.328.5166 with questions about mercury or PCB-containing waste.

- E. **Regulated asbestos-containing material** must be properly removed from structures scheduled for demolition. Asbestos is a known carcinogen, and proper handling is critical to protect public health and safety. Depending on what type of structure is being demolished, an inspection for regulated asbestos-containing material may be required. The Department's Division of Air Quality regulates asbestos inspection, removal, and transportation to a disposal facility. A "Notification of Demolition" form is often required for structure demolition projects and must be submitted to the Division of Air Quality at least ten (10) days before beginning demolition. Regulated asbestos-containing material must be disposed at permitted landfills approved for asbestos disposal. A "Notification of Demolition" form and Division of Air Quality guidelines for asbestos handling are included with the application. Please contact the Division of Air Quality's Radiation and Asbestos Control Program at 701.328.5188 with questions about asbestos.

III. **Recycling Inert Waste**

Depending on the type and location of the inert waste, it may be practical to recycle or reuse a portion of the waste. For example, road construction contractors may be interested in crushing a large concrete or brick structure into road base material. Metal recycles may be interested in recovering steel structural members or special metals such as copper from structures. Wood materials can be used for heating purposes or shredded to reduce volume and provide a mulching material. Hardwood flooring or woodwork in some structures may be of use to commercial or hobby woodworkers. The Department encourages inert waste reuse and recycling provided no nuisances are created by the activity.

IV. **Disposal Site Selection**

The inert waste disposal site must be carefully selected. Avoid environmentally sensitive or unstable areas that will not provide safe, long-term waste disposal. For example, wetlands, gravel pits, floodplains, and shallow water table areas are environmentally sensitive because of surface and groundwater pollution concerns. Ravines, woody draws, and steeply sloping terrains are unstable areas subject to accelerated erosion which may expose the waste.

To assure safe, long-term inert waste disposal, the site should be nearly level to moderately sloping, well drained, and meet the following criteria:

1. Maximum site slope of nine (9) percent;

2. Minimum distance of two hundred (200) feet to nearest surface water;
3. Minimum depth of 4 feet to seasonal high water table (waste disposal in the water table is prohibited); and
4. Underlain by loamy, silty, or clayey soils (sandy or gravelly soils are unacceptable).

Soil survey maps, available through local Natural Resources Conservation Service (NRCS) offices (formerly the Soil Conservation Service) provide the necessary information for disposal site selection. Soil survey maps depict soil types on an aerial photo base. The maps are very useful because they show not only soil types, but also drainage and cultural features such as streams, wetlands, roads, field boundaries, and building sites. Soil types depicted on published soil survey maps are described in the survey report. The survey report includes soil descriptions and tables which describe soil slope, texture, depth to seasonal high water table, and other soil properties.

Most North Dakota counties have a published soil survey. Contact the county NRCS office to ask if published soil survey information is available and to receive assistance for soil map interpretation. Some North Dakota counties do not have published soil survey information. In these counties, the survey may be completed but not published, or the survey is in progress. To obtain soil survey information in these counties, you must request a preliminary soil survey of a specific area from the county NRCS office. Preliminary soil survey maps usually produce poor quality photocopies. Request the NRCS staff to produce the best possible photocopy of the specific area. In very few cases, soil survey information may not be available for a specific area. If soil survey information is not available, the Department may have other information sources to assess site suitability, or an on-site Departmental inspection may be necessary. Please contact the Solid Waste Program at 701.328.5166 for assistance in disposal site selection if soil survey information is not available for a specific area.

The site proposed for inert waste disposal must be accurately depicted on a legible map accompanying the disposal variance application. Legible photocopies of published soil survey maps are acceptable for this purpose; however, photocopies of unpublished soil survey maps are unacceptable because of poor reproduction. Where published soil survey information is unavailable, an aerial photograph photocopy from the Consolidated Farm Services Agency (CFSA), formerly the Agricultural Conservation and Stabilization Service, can be used to depict the proposed disposal area. These photocopies cover one section of land and are available for a nominal fee for all areas of the state. Contact the county CFSA to request a photocopy for a particular section of interest.

V. Land Use and Zoning Concerns

Applicants for an inert waste disposal variance must ensure that the disposal activity is acceptable to the landowner and local zoning and health officials. The variance application requires information from the landowner and local zoning authority. Careful planning and assurances that all waste will be inert can help ease any concerns on the

proposal. It is also beneficial to keep neighboring landowners informed throughout the project to help avoid any delays and undue alarm.

VI. Site Control and 90-Day Variance Duration

Disposal operations must be tightly controlled and completed as soon as possible to avoid potential problems. Access control through fencing, barriers, gates, or supervision as necessary will help avoid open dumping, prohibited waste disposal, scavenging, vandalism, and possible injury. The variance requires inert waste disposal to be completed and the site properly closed within 90 days. Extensions will be considered only in cases of emergency or significant extenuating circumstances.

VII. Disposal Site Preparation and Operation

A. Stormwater Control

Stormwater control measures shall be in place before beginning any dirt work at the inert waste disposal site. Stormwater is simply precipitation or snowmelt. The concern with stormwater is not the water itself. Rather, the concern is the soil or other pollutants which may be carried in stormwater off the disposal site and deposited in drainageways, stormwater sewers, or surface water.

Effective stormwater control involves methods or materials to prevent pollutants, mainly soil, from leaving the disposal site. Methods and materials for stormwater control include:

1. Careful site selection and development and diversion of upslope surface water run-on;
2. Minimizing the area disturbed for waste disposal, especially if the disposal area has existing vegetative cover;
3. Maintaining a "buffer" of undisturbed vegetative cover around the disposal area to trap soil before it leaves the site; and
4. Placing straw bales, silt fences, or similar material where concentrated surface water runs off the disposal site. Straw bales or silt fences must be anchored in the ground to be effective in trapping soil before it leaves the site.

If the inert waste disposal area exceeds five acres (or after March 1, 2003, one acre), a permit for stormwater discharge may be required by the Department's Division of Water Quality (DWQ). Please contact the DWQ Wastewater Facility/Permits Program at 701.328.5210 with questions about stormwater discharge permits.

B. Topsoil Stripping

Topsoil is the dark colored surface layer of soil that is rich in organic matter and nutrients. Topsoil is critically important to establishing vegetation for reclamation of

disturbed areas. It is important, therefore, to strip topsoil from the inert waste disposal area before excavating the disposal trench. Depending on the disposal site's geographic location and landscape position, topsoil may be as little as 3 inches or more than 15 inches thick. Topsoil must be stripped from the excavation area and saved at the site for reclaiming the disposal area.

C. Open Burning

Open burning, as opposed to recycling, reuse, or burial, may be a disposal option for trees or nonsalvageable wood from structures. Open burning trees and wood is an option, however, only under the following conditions:

1. All other forms of recycling, reuse, or disposal are either impracticable or prohibitively expensive;
2. The wood must be clean burning, i.e., it must be free of materials that will produce unreasonable smoke (asphalt shingles, rubber, etc.) or will smolder for extended periods; and
3. A burn variance must be received from the Air Quality Compliance Program. A burn variance application is included with the application. All portions of the application must be completed, including the local fire department coordination approval, and district health unit coordination approval if the county belongs to a district health unit. Upon receipt of a burn variance, open burning may proceed after notifying the local fire department. Please contact the Air Quality Compliance Program at 701.328.5188 with questions about open burning.

D. Trench Excavation and Debris Compaction

The disposal trench may be excavated after stripping and stockpiling disposal site topsoil. Depending on the site selected, disposal trench depth may be limited by soil conditions or by the seasonal high water table depth. Remember, inert waste disposal in the water table is prohibited. Depth of the seasonal high water table in glaciated portions of North Dakota is usually indicated by a change in subsoil color from brown or tan to gray with increasing depth.

Inert waste should be compacted with heavy equipment as it is placed in the disposal trench. Waste compaction serves two purposes: (1) it reduces the size of excavation required for waste disposal by maximizing use of disposal trenches, and (2) it reduces potential problems of soil settling (subsidence) after the disposal area is reclaimed. Other forms of waste volume reduction, besides compaction, may serve to reduce required size of the disposal excavation. For example, wood or trees can be shredded to reduce disposal volume.

VIII. Disposal Site Closure

Disposal trenches should not be filled to excavation capacity. Instead, maintain at least two (2) feet between the inert waste and original ground elevation (before stripping

topsoil). The entire site should be cleaned and all waste, including burned debris ash, must be consolidated in the trench. The disposal area must receive at least two and one-half (2½) feet of soil cover, including reapplied topsoil. The soil cover should be carefully graded to form a slightly convex, or domed, surface that will promote surface water run-off. If the disposal area will be used for pastureland, hayland, or wildlife habitat, the disturbed area should be seeded to climatically adapted grasses or legumes. Erosion control measures such as incorporating straw or planting a cover crop may be necessary if permanent cover planting is delayed. Maintain stormwater control measures for at least one year after the site is closed.

IX. Notification of Disposal Activity

As a condition for an inert waste disposal variance, the Department requires that a Notice of Disposal activity be filed with the County Register of Deeds office. The notice informs anyone conducting a title search of the disposal site property that a specific area of land was used for inert waste disposal. Limiting the disposal to inert waste, maintaining an orderly operation, and careful site closure will help minimize future landowner concerns on the site and may help ensure future saleability of the property.

An affidavit which may be used for filing the notice is included with the application. Blanks on the affidavit should be completed to describe the disposal location and type of inert waste. The affidavit must be signed by the property owner and notarized. Use the partial section notation, e.g., NE 1/4 of the NE 1/4 of the NW 1/4 of Section 14, to describe the disposal area as accurately as possible. In the example given, the disposal area is described as ten (10) acres. The partial section notation can describe very small disposal areas, provided they are in corners of quarter sections where landmarks (fence lines, tree rows) can be used to identify the area on a map.

The original of the Notice of Inert Waste Disposal form should be filed with the County Register of Deeds office. A nominal fee is usually required for filing. When filing the notice, the property owner should ask the Register to forward a certified copy of the notice to the Department's SWP. Contact the North Dakota Department of Health, Division of Waste Management, 918 E. Divide Ave., 3rd Fl., Bismarck ND 58501-1947, or call at 701.328.5166, with questions about the inert waste disposal notice.

Documents required for the application completion:

- [Affidavit And Notice Of Disposal Facility](#)
- [Inert Waste Disposal Variance Application](#)
- [Department Of Transportation Projects Inert Waste Disposal Variance Application](#)

Other references:

- Polychlorinated Biphenyls (PCB) Wastes
- Used Oil Filters
- Used Antifreeze
- Agricultural Spills, Reporting and Remediation
- [Guideline 5 Quality Assurance For Construction Of Landfill And Surface Impoundment Liners, Caps, And Leachate Collection Systems](#)

- [Guideline 9 - Signs Required at Solid Waste Management Facilities](#)
- [Guideline 24 - General Native Grass Seeding](#)
- List of North Dakota District Health Units

Division of Air Quality forms:

- SFN-8509 Application for Open Burning Variance
- SFN-17987 Notification of Demolition and Renovation
- Summary of Asbestos Requirements

SFN: State Form Number